



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE NUMBER USA/0335/S-96, REVISION 8

East Building, PHH-23
1200 New Jersey Avenue SE
Washington, D.C. 20590

This certifies that the sources described have been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and United States of America² for the transport of radioactive material.

1. Source Identification - QSA Global, Inc. Model 875 Series.
2. Source Description - Cylindrical single or double encapsulations with the outer capsule made of Type 304L stainless steel and tungsten inert gas or laser welded. Approximate outer dimensions are 6.35 mm (0.25 in.) in diameter and either 19.05 mm (0.75 in.) or 24.2 mm (0.954 in.) in length. Inner capsules, when present, are made of stainless steel or titanium. Construction of the outer capsule shall be in accordance with attached QSA Global, Inc. Drawing No. R875 OUTER, Rev. C. Construction of any inner capsule shall be in accordance with attached QSA Global, Inc. Drawing No. R875 INNER, Rev. C or QSA Global, Inc. Drawing No. R87527-40, Rev. A.
3. Radioactive Contents - No more than either 8.88 TBq (240 Ci) of Iridium-192 as a solid metal; 8.14 TBq (220 Ci) of Cobalt-60 as a solid metal; 5.56 TBq (150 Ci) of Selenium-75 as an encapsulated solid metal; 1.11 TBq (30 Ci) of Cesium-137 as encapsulated CsCl₂; 1.85 TBq (50 Ci) of Thulium-170 as Tm₂O₃; or 7.4 TBq (200 Ci) of Ytterbium-169 as Yb₂O₃.
4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations¹ shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors and consignees in the United States exporting or importing shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires August 31, 2012. On September 30, 2007, this certificate supersedes all previous revisions of USA/0335/S-96.

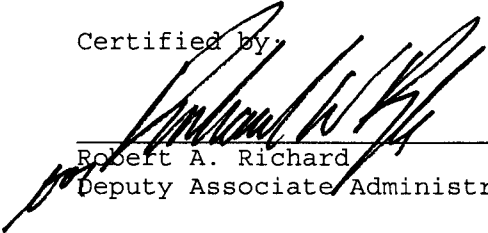
¹ "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

² Title 49, Code of Federal Regulations, Parts 100 - 199, United States of America.

CERTIFICATE USA/0335/S-96, REVISION 8

This certificate is issued in accordance with paragraph 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the July 25, 2007 petition by QSA Global, Inc., Burlington, MA and in consideration of other information on file in this Office.

Certified by:



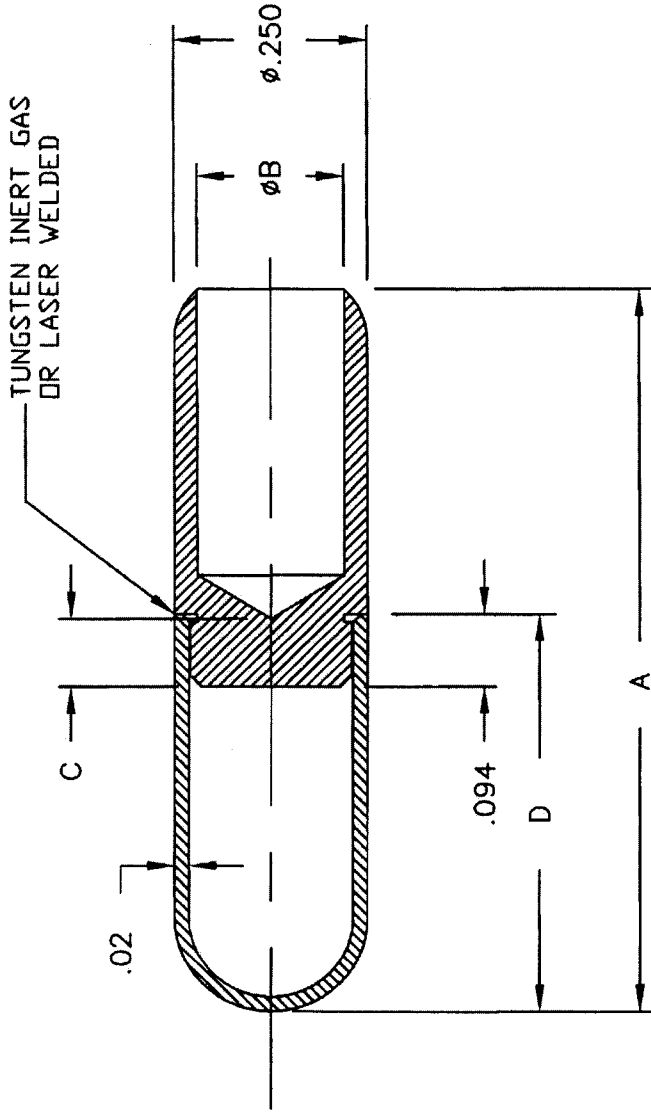
Robert A. Richard

Deputy Associate Administrator for Hazardous Materials Safety

JUL 31 2007

(DATE)


Revision 8 - Issued to allow laser welding and to extend the expiration date.

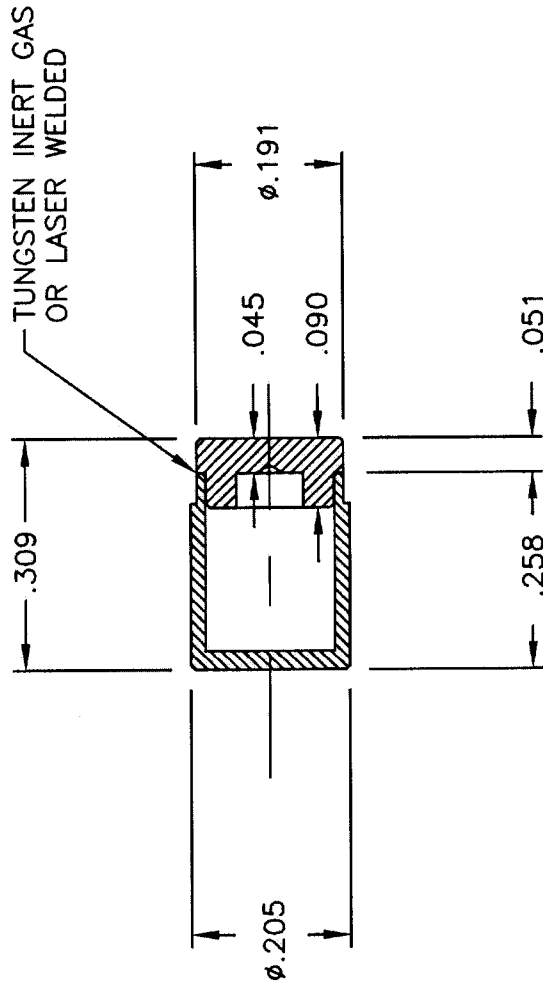


CAPSULE NO.	A	ϕB	C	D
87501	.954	.190	.150	.522
88702	.750	.190	.118	.522

NOTES:

1. INTERNAL VOID TO BE 0.010 mL OR GREATER.
2. MATERIAL: 304L STAINLESS STEEL.

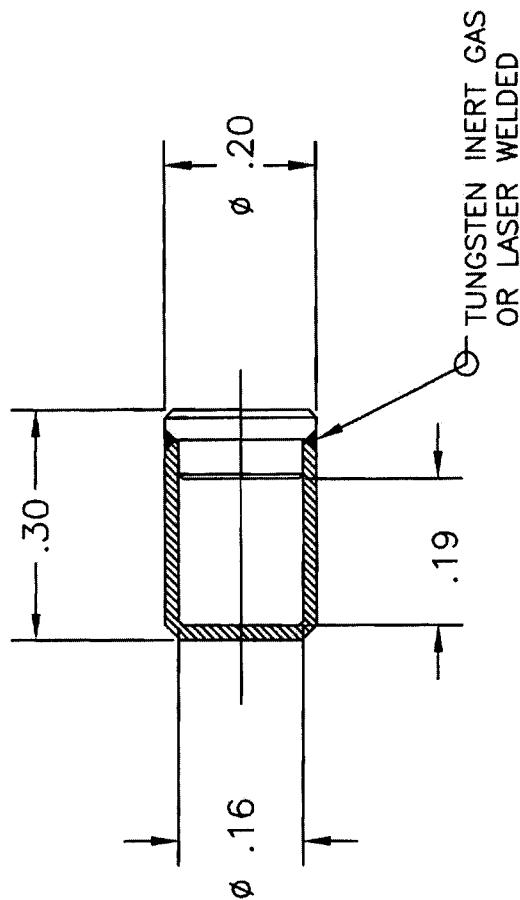
APPROVALS		DATE	 QSA GLOBAL 40 NORTH AVE. BURLINGTON, MA 01803		DESCRIPTIVE DRAWING	
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES: FRACTIONS $\pm 1/8$ X.X ± 0.12 X.XX ± 0.06 X.XXX ± 0.020		7-27-07	24 Aug 07		TITLE 875 SERIES SDDR OUTER CAPSULE	
ERF # 1739		DWG. NO. R875 OUTER		SCALE: NONE		REV C



NOTES:


1. MATERIAL: 304L STAINLESS STEEL.
2. INTERNAL VOID VOLUME TO BE 0.010 mL OR GREATER.
3. INNER CAVITY DIMENSIONS MAY VARY. METALLIC SPACERS, SPRINGS AND GUARDS WHICH SECURE AND/OR LOCATE THE RADIOACTIVE MATERIAL WITHIN THE CAPSULE MAY BE USED.
4. MINIMUM WALL THICKNESS TO BE 0.019.

APPROVALS		DATE	QSA GLOBAL 40 NORTH AVE, BURLINGTON, MA 01803	DESCRIPTIVE DRAWING	
<i>[Signature]</i> <i>[Signature]</i>		25 Jun 07 25 Jul 07		TITLE 875 SERIES INNER CAPSULE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES: FRACTIONS $\pm 1/8$ XX ± 0.12 X.XX ± 0.06 X.XXX ± 0.020			SIZE A	DWG. NO. R875 INNER	REV C
ERF # 1739			SCALE: NONE	SHEET 1 OF 1	REV C



NOTES:

1. MATERIAL: 316L STAINLESS STEEL OR EQUIVALENT, OPTIONAL MATERIAL: COMMERCIALLY PURE TITANIUM, GRADE 4.
2. INNER CAVITY DIMENSIONS MAY VARY. METALLIC SPACERS, SPRINGS AND GAURDS WHICH SECURE AND/OR LOCATE THE RADIOACTIVE MATERIAL WITHIN THE CAPSULE MAY BE USED.
3. MINIMUM WALL THICKNESS TO BE 0.009.

APPROVALS		DATE	 QSA GLOBAL 40 NORTH AVE, BURLINGTON, MA 01803		DESCRIPTIVE DRAWING
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES: FRACTIONS $\pm 1/8$ X.X ± 0.12 X.XX ± 0.06 X.XXX ± 0.020		7-27-07 24 June 07	TITLE X540N CAPSULE ASSEMBLY		
ERF # 1739		DWG. NO. R87527-40		REV A	
		SCALE: NONE		SHEET 1 OF 1	



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